Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	ET Docket No. 00-258
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	)	Public Notice DA 01-786
Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000	)	RM-9920
Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service	)	RM-9911

COMMENTS OF MEDLEY SYSTEMS

Medley Systems hereby comments on the above referenced Docket in response to the invitation in the FCC Public Notice [1] that released the Staff Final Report [2], and in particular to those aspects of the Report concerning alternative frequency bands for relocation of the MDS/ITFS two-way fixed BWA service.

1. INTRODUCTION

Medley Systems is an independent consultancy specializing in fixed broadband wireless access product and market development strategies for the Americas and Europe. In particular, we focus on business case issues for service providers, plus the associated spectrum and technology drivers.

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[1] FCC Public Notice DA 01-786 dated March 30th, 2001

[2] Final Report : Spectrum Study of the 2500 – 2690 MHz Band. The Potential for Accommodating Third Generation Mobile Systems

2. IDENTIFICATION and ANALYSIS of ALTERNATIVE FREQUENCY BANDS for ITFS/MDS

In its Final Report (Section 6) the FCC Staff reviews various candidate bands for relocating MDS/ITFS licensees in the event that [90 MHz] of MDS/ITFS spectrum is reallocated for 3G mobile service. The Wireless Communications Association International (WCA) and other MDS/ITFS commenters under the 3G Spectrum Proceeding have stated that the Commission and 3G proponents have failed (yet) to identify any [feasible / viable] band for relocation of the MDS/ITFS services.

Medley Systems makes four comments in relation to the Staff assumptions in the Final Report :

a) The Final Report (Page 60) states an assumption that "ITFS and MDS operations would not be relocated to separate frequency bands. The two services currently have extensive and complex channel leasing arrangements that provide benefits for education, businesses and consumers. Separation of these operations would have extensive policy ramifications beyond the scope of this study. It is not clear that either service would be viable if they were separated into different frequency bands, even if this were technically possible. "

Medley Systems suggests that the benefits currently enjoyed by the ITFS industry are essentially in the form of a financial "subsidy" from the two-way MDS industry and/or the (potential) provision of two-way Internet access services via MDS facilities and the sharing of towers etc. These benefits would not preclude relocating the MDS (two-way) licensees to an alternate band while leaving MDS and ITFS (one-way) operations in the existing bands. The two-way MDS industry could choose to continue to provide financial assistance to the ITFS industry (in addition to the other subsidies available to schools, libraries and health care organizations) and could choose to continue to provide (subsidized) two-way services to the education services and lease towers etc where appropriate. It should then be possible for 3G mobile services to occupy a segment of the current MDS/ITFS bands alongside the remaining one-way broadcast operations of the wireless cable and ITFS services. The two-way MDS services would also benefit from not having to coordinate complex sharing and duplexing arrangements with high power broadcast services in adjacent / nearby channels and locations.

b) The Commission has not (so far) identified the 3400 – 3700 MHz band as a potential relocation band for two-way MDS licensees (noting that the 3650 – 3700 MHz segment is already proposed for Part 27 licensing under FCC Docket ET98-237). Parts of the 3400 – 3700 MHz band are being used for fixed BWA applications internationally (including Canada,

Mexico and other CITEL countries) and the same manufacturers mentioned by the MDS commenters in the 3G Spectrum Proceeding (e.g. Cisco, ADC, Nortel, Vyyo) are also making (or developing) versions of the their fixed BWA equipment for the International 3400 – 3700 MHz market, increasing the scope for economies of scale and global harmonization of fixed BWA solutions if the US were able to also harmonize within (parts of) this band.

Medley Systems notes that the possible use of (parts of) the 3400 - 3700 MHz band for FWA applications was the subject of an earlier "Mountain Telecommunications / Saddleback Communications Petition" for the United States, and noted the denial of that Petition as part of the recent 3650 –3700 MHz Order [3], based on a letter from NTIA [4] regarding the ongoing Government use (DoD) for this band. However, Medley Systems is also aware that the detailed tests and discussions held with Nortel and DoD at the time suggests that the DoD / NTIA would find it easier / cheaper to share (or lease) parts of the 3400 – 3700 MHz band in the domestic US market with fixed BWA than to share (or concede) the 1710 – 1850 MHz band for 3G Mobile use. The DoD radiolocation systems in or near the 3400 – 3700 MHz already coexist with FWA and (potential) BWA deployments in that band outside the United States (including Canada, Mexico and other CITEL markets), based on previous International and Regional spectrum allocations / Recommendations.

c) The protests by various MDS commenters that relocation to a (higher) frequency band would add 2-3 years to their deployment plans, and increase the equipment costs would not apply to the 3400 – 3700 MHz band. As mentioned previously, the same vendors are providing versions of the same equipment for this band (now) and the propagation characteristics for FWA deployments to residential and small business customers in this band have already been demonstrated in numerous countries outside the United States. The 3 GHz "limit" used by the Commission so far in this proceeding is an arbitrary boundary which should not preclude the consideration of 3400 – 3700 MHz for two-way fixed BWA applications.

d) When considering the potential relocation of two-way fixed BWA service from the MDS/ITFS bands to (parts of) the 3400 – 3700 MHz band, the Commission should note comments [5] in the recent 3650 – 3700 MHz NPRM which describe newer, high efficiency wireless

[3] Docket ET98-237 : First R&O and 2nd NPRM Adopted Oct 12,2000 at ¶15

[4] *See* letter dated June 30, 2000 from William T. Hatch, Associate Administrator, NTIA to Dale Hatfield, Chief OET.

[5] ET Docket ET98-237 : Transcomm Comment Dec 18, 2000

techniques which will meet all the service and economic requirements of residential and small business fixed BWA but with one tenth of the wide area spectrum allocation. Similar technology is currently being deployed by AT&T [6] in its Wireless CLEC program using the PCS and WCS bands, and would enable the two-way MDS operators to meet their single cell and other deployment objectives in much less than the 150 – 200 MHz spectrum required [7] by the less efficient technologies currently being trialed / deployed in the MDS/ITFS band.

5. CONCLUSIONS

Medley Systems respectfully suggests that the Commission should ask NTIA to investigate the relative merits (for Government users) of relocating two-way MDS licensees to (parts of) the 3400 – 3700 MHz band (in lieu of the potential allocation of 3G Mobile to the 1710 – 1850 MHz band). The Commission should also ask WCA (and HAI) to re-evaluate their business case arguments and deployment plans based on the future use of "high efficiency" technologies (in the MDS / ITFS or 3400 –3700 MHz bands) as described in the recent 3650 – 3700 MHz proceeding. Medley Systems would be pleased to help the Commission, NTIA, WCA, HAI and other interested parties with these evaluations, if requested.

Medley Systems envisages a conclusion that would show that it is economically and technically feasible to share the MDS/ITFS bands with 3G mobile systems, either by using "high efficiency" two-way fixed BWA technology in the MDS band or by relocating two-way fixed BWA to parts of the 3400 – 3700 MHz band.

Respectfully Submitted

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[6] "Angel Takes Flight" AT&T May 18,2000 (http://www.att.com/technology/features/0005fixedwireless.html)

"AT&T Wireless To Offer Residential Broadband Service in Four New Cities" AT&T July 19,2000 (http://www.att.com/press/item/0,1354,3089,00.html)

[7] See Comments of WCA / HAI, WorldCom *et alia* in 3G Spectrum Proceeding.